

TOP SECRET**PRIORITY**
OUT53774

T O P S E C R E T 190101Z

1964 JUL 19 01 52Z JUL 1964
25X1

~~HRS~~ _____
~~CJS~~ _____
~~CEC~~ _____
~~PNS~~ _____
~~ACL~~ _____

Grace (File)

1. ENCLOSED ARE ROLL, PITCH, AND YAW VALUES FOR MISSION 4009 AFTER RUN OUT, THAT IS, STELLAR FRAME 103 TO 182 SUCCEEDED BY 45 ORIGINALLY UNNUMBERED FRAMES, ARBITRARILY NUMBERED IN THIS CABLE AS 501 TO 545, AT WHICH TIME STELLAR IMAGERY FADED TO WHERE NO STARS WERE MEASURABLE.

2. TIME CORRELATION WAS ACCOMPLISHED BY MATCHING THE IMAGES OF INDEX WITH CORRESPONDING IMAGES ON STRIP WHENEVER POSSIBLE. ALL OTHER CORRELATIONS WERE ASSUMED TO CONFORM WITH PROGRAMMED TIMES, THAT IS, WITH PREVIOUS CYCLIC PATTERNS EXPERIENCED IN MISSION 4009.

3. THERE WERE DEFINITE ERRORS IN THE SIX SECOND EPHEMERIS WHICH COMPLICATED ANALYSIS. SUGGEST THAT STUDY OF EPHEMERIS DIFFICULTIES BE DEFERRED UNTIL A LATER DATE.

4. ADDITIONAL PITCH, ROLL, AND YAW FOR WHATEVER CAN BE REDUCED WILL BE FORWARDED BY CABLE MONDAY, 20 JULY 1964, P.M.

INDEX	ROLL	PITCH	YAW	
FRAME NO.	DEG.	MIN.DEG	MIN.DEG.	MIN. EVALUATION
103	MINUS 19 53	MINUS 05 07	PLUS 21 14	
104	MINUS 20 16	MINUS 05 06	PLUS 20 49	
111	MINUS 23 49	MINUS 04 37	PLUS 16 32	

25X1

TOP SECRET

GROUP 1
 EXCLUDED FROM AUTOMATIC
 DOWNGRADING AND
 DECLASSIFICATION

114 MINUS 24 42 MINUS 04 16 PLUS 15 15
 117 MINUS 25 34 MINUS 03 59 PLUS 13 49
 121 MINUS 27 13 MINUS 03 16 PLUS 10 24
 122 MINUS 27 24 MINUS 03 00 PLUS 10 01 56 DEG. NORTH
 DESCENDING 26TH
 REV.
 123 MINUS 27 36 MINUS 02 58 PLUS 09 29
 124 MINUS 27 47 MINUS 02 51 PLUS 08 57
 125 MINUS 27 57 MINUS 02 43 PLUS 08 25
 126 MINUS 28 07 MINUS 02 31 PLUS 07 58
 127 MINUS 28 41 MINUS 01 53 PLUS 05 57
 128 MINUS 28 47 MINUS 01 42 PLUS 05 27
 129 MINUS 28 54 MINUS 01 35 PLUS 04 53
 130 MINUS 28 59 MINUS 01 23 PLUS 04 23
 131 MINUS 29 02 MINUS 01 14 PLUS 03 53
 132 MINUS 29 08 MINUS 01 06 PLUS 03 23 2 STARS
 133 MINUS 29 10 MINUS 00 58 PLUS 02 54
 134 MINUS 29 14 MINUS 00 49 PLUS 02 28 2 STARS
 135 MINUS 29 24 PLUS 00 04 PLUS 00 14
 136 MINUS 29 23 PLUS 00 12 MINUS 00 21
 137 MINUS 29 20 PLUS 00 23 MINUS 00 54
 138 MINUS 29 17 PLUS 00 44 MINUS 01 24
 139 MINUS 29 12 PLUS 00 54 MINUS 01 58 2 STARS
 140 MINUS 29 09 PLUS 01 01 MINUS 02 35
 141 MINUS 29 07 PLUS 01 10 MINUS 03 12

142 MINUS 29 04 PLUS 01 34 MINUS 03 39
143 MINUS 28 52 PLUS 02 49 MINUS 06 01
144 MINUS 28 49 PLUS 03 00 MINUS 06 41
145 MINUS 28 46 PLUS 03 16 MINUS 07 18
146 MINUS 28 45 PLUS 03 36 MINUS 07 55
147 MINUS 28 43 PLUS 03 38 MINUS 08 45 2 STARS
148 MINUS 28 43 PLUS 03 57 MINUS 09 23
149 MINUS 28 44 PLUS 04 10 MINUS 10 06
150 MINUS 28 46 PLUS 04 13 MINUS 10 56
151 MINUS 29 02 PLUS 04 45 MINUS 13 01
152 MINUS 28 45 PLUS 04 51 MINUS 13 32
153 MINUS 28 27 PLUS 04 58 MINUS 14 01
154 MINUS 28 10 PLUS 05 09 MINUS 14 27
155 MINUS 27 50 PLUS 05 06 MINUS 15 03
156 MINUS 27 33 PLUS 05 19 MINUS 15 32
157 MINUS 27 14 PLUS 05 27 MINUS 15 53
158 MINUS 26 56 PLUS 05 41 MINUS 16 16
159 MINUS 21 00 PLUS 06 01 MINUS 23 00
160 MINUS 20 34 PLUS 05 58 MINUS 23 18
161 MINUS 20 08 PLUS 05 57 MINUS 23 35
162 MINUS 19 42 PLUS 05 51 MINUS 23 54
163 MINUS 19 16 PLUS 05 47 MINUS 24 08
164 MINUS 18 46 PLUS 05 51 MINUS 24 23
165 MINUS 18 19 PLUS 05 54 MINUS 24 38
166 MINUS 17 54 PLUS 05 51 MINUS 24 52

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167	MINUS 16	06	PLUS 06	06	MINUS 25	49
168	MINUS 15	39	PLUS 06	07	MINUS 26	02
169	MINUS 15	11	PLUS 06	06	MINUS 26	14
170	MINUS 14	42	PLUS 06	09	MINUS 26	26
171	MINUS 14	16	PLUS 06	11	MINUS 26	38
172	MINUS 13	50	PLUS 06	10	MINUS 26	49
173	MINUS 13	18	PLUS 06	13	MINUS 27	00
174	MINUS 12	50	PLUS 06	12	MINUS 27	11
175	MINUS 10	55	PLUS 06	29	MINUS 27	46
176	MINUS 10	23	PLUS 06	37	MINUS 27	52
177	MINUS 09	51	PLUS 06	34	MINUS 28	00
178	MINUS 09	22	PLUS 06	27	MINUS 28	16
179	MINUS 08	50	PLUS 06	40	MINUS 28	12
180	MINUS 08	20	PLUS 06	36	MINUS 28	19
181	MINUS 07	50	PLUS 06	26	MINUS 28	26
182	MINUS 07	22	PLUS 06	18	MINUS 28	32
501	MINUS 05	30	PLUS 05	46	MINUS 28	51
502	MINUS 05	05	PLUS 05	37	MINUS 28	54
503	MINUS 04	39	PLUS 05	21	MINUS 28	57
504	MINUS 04	11	PLUS 05	10	MINUS 28	59
505	MINUS 03	43	PLUS 05	5	MINUS 28	59
506	MINUS 03	13	PLUS 04	49	MINUS 29	00
507	MINUS 02	43	PLUS 04	37	MINUS 28	59
508	MINUS 02	14	PLUS 04	33	MINUS 28	57
509	MINUS 00	09	PLUS 04	04	MINUS 29	12

511	PLUS	00	46	PLUS	03	48	MINUS	29	16
512	PLUS	01	13	PLUS	03	39	MINUS	29	17
513	PLUS	01	40	PLUS	03	32	MINUS	29	17
514	PLUS	02	06	PLUS	03	26	MINUS	29	17
515	PLUS	02	33	PLUS	03	17	MINUS	29	15
516	PLUS	03	02	PLUS	03	10	MINUS	29	14
517	PLUS	04	59	PLUS	02	57	MINUS	28	59
518	PLUS	05	27	PLUS	02	47	MINUS	28	53
519	PLUS	05	55	PLUS	02	36	MINUS	28	46
520	PLUS	06	22	PLUS	02	25	MINUS	28	39
521	PLUS	06	52	PLUS	02	18	MINUS	28	30
522	PLUS	07	21	PLUS	02	04	MINUS	28	21
523	PLUS	07	50	PLUS	01	56	MINUS	28	12
524	PLUS	08	19	PLUS	01	47	MINUS	28	02
525	PLUS	10	10	PLUS	01	27	MINUS	27	16
526	PLUS	10	34	PLUS	01	24	MINUS	27	04
527	PLUS	10	58	PLUS	01	10	MINUS	26	49
528	PLUS	11	22	PLUS	01	01	MINUS	26	35
529	PLUS	11	48	PLUS	00	46	MINUS	26	21
530	PLUS	12	17	PLUS	00	44	MINUS	26	05
531	PLUS	12	46	PLUS	00	41	MINUS	25	52
532	PLUS	13	14	PLUS	00	33	MINUS	25	41
533	PLUS	15	08	PLUS	00	18	MINUS	24	58
534	PLUS	15	31	PLUS	00	08	MINUS	24	45
535	PLUS	15	56	PLUS	00	00	MINUS	24	33

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536 PLUS 16 19 MINUS 00 04 MINUS 24 20
537 PLUS 16 43 MINUS 00 07 MINUS 24 07
538 PLUS 17 04 MINUS 00 21 MINUS 23 53
539 PLUS 17 26 MINUS 00 13 MINUS 23 38
540 PLUS 17 48 MINUS 00 16 MINUS 23 27
541 PLUS 19 14 MINUS 00 05 MINUS 22 30
542 PLUS 19 36 MINUS 00 18 MINUS 22 13
543 PLUS 20 02 MINUS 00 11 MINUS 21 57
545 PLUS 20 49 MINUS 00 26 MINUS 21 26 56 SOUTH (DEGREES)
ASCENDING
26TH REV.

T O P S E C R E T

-END OF MESSAGE-